

## Bellringer

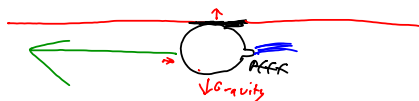
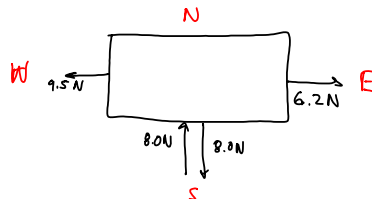
→ What are Newton's Laws of Motion?

Give an example of each law of motion.

- 1) Inertia
- 2)  $\frac{F_{\text{net}}}{m} = a$   $\xrightarrow{\text{N}}$   $\xrightarrow{\text{m/s}^2}$   $\xrightarrow{\text{kg} \cdot \text{m/s}^2}$   $\xrightarrow{\text{Newtons (N)}}$  or
- 3)

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→ A box with 0.82 kg has these forces acting on it. What direction is the net force?



# Gravity & Friction Review

Grade: 8th

Subject: Physical Science

Date:

- 1 The combination of all forces acting on an object is known as a \_\_\_\_\_ force.

2 The tendency of an object to resist change in its motion is called \_\_\_\_\_.

3 \_\_\_\_\_ is the force that resists the motion of two surfaces that are touching.

4 \_\_\_\_\_ is the gravitational pull on an object.

5 \_\_\_\_\_ is an attractive force that exists between two objects. It depends on the objects mass and how far the two objects are from each other.

6 \_\_\_\_\_ is the amount of matter in an object

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→ A 24 N force acts on a 3 kg rock.

What is the acceleration on the rock?

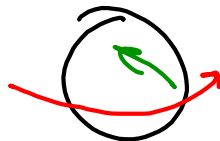
$$F = ma \quad \text{or} \quad \frac{F}{m} = a$$

→ Does mass affect force? momentum?

$$F = ma \quad P = m \cdot v$$

→ State the law of conservation of momentum.

$$\text{acceleration of gravity} = 9.8 \boxed{\text{m/s}^2}$$



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→ Imagine yourself as a Native American arriving at Bear Gulch 700 years ago. What story would you tell? What pictograph/petroglyph would represent this story?

Newton's Laws of Motion ppt Notes

|         |                       |
|---------|-----------------------|
| 1 slide | 1st Law - Explanation |
| 2nd     | Example               |
| 3rd     | 2nd Law → "           |
| 4th     | Example               |
| 5th     | 3rd Law → "           |
| 6th     | Example               |
| 7th     | Momentum → "          |
| 8th     | Example               |

# Laws of Motion Review

Grade: 8th

Subject: Physical Science

Date:

## phys sci

Grade: «grade»

Subject: «subject»

Date: «date»

- 1 A 24-N net force acts on a 8-kg rock. What is the acceleration of the rock (in m/s/s)?

- 2 A 30-N net force on a skater produces an acceleration of 0.6 m/s/s. What is the mass of the skater (in kg)?



- 3 What net force acting on a 14-kg wagon produces an acceleration of  $1.5 \text{ m/s/s}$  (answer in Newtons, N)?

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- 4 While circular motion is occurring, the force that points in, towards the center of the curve, is the \_\_\_\_\_ force.

5 What is the momentum of a 1.5-kg ball rolling at 3.0 m/s (answer is in kg\*m/s)?

6 A 55-kg woman has a momentum of 220 kg\*m/s. What is her velocity (in m/s)?

7 According to the law of conservation of momentum, the total momentum of a group of objects changes when outside forces act on the objects.

True

False